Installing External Sounders

The FA1700c provides two Notification Appliance Circuits for operating fire and burglary alarm notification appliances. Each circuit is rated as follows: 10VDC – 14VDC, 1.7A max., power-limited. **NOTE:** The total alarm current drawn from Auxiliary Power 1, Auxiliary Power 2, polling loop, Bell 1, and Bell 2 cannot exceed 2.3 amps for battery-independent operation.

The outputs has the following options:

- Selectable for supervision.
- Selectable to activate by individual zone assignments
- Selectable for confirmation of arming ding.
- Selectable to chime when entry/exit or perimeter zones are faulted.
- Selectable for steady or pulsing
- Selectable for no timeout or timeout of 2-30 minutes.

If you purchased a kit containing the PS24 Power Supply Module, you may use this module to convert one or both FA1700c, 1.7A style-Y supervised Notification Appliance Circuits to 24VFW, 1.7A style-Y supervised Notification Appliance Circuits.

UL

- Burglary Notification Appliance Circuits must be programmed for a timeout of 16 minutes or longer.
- Commercial fire alarm systems require Notification Appliance Circuits to be supervised.

UL

This control complies with National Fire Protection Association (NFPA) requirements for temporal pulse sounding of fire notification appliances.

Notification Appliance Circuit Supervision

When supervision is enabled, the FA1700c monitors the Notification Appliance Circuits wiring for open and short circuit faults while the output is inactive. The system provides a trouble indication (Zone 970 Bell 1; 971 Bell 2) when an open occurs; or when a short occurs between the Bell (+) and Bell (-) terminal wiring, or between the Bell (+) terminal wiring and earth ground.

The FA1700c indicates the trouble condition regardless of whether the system is armed or disarmed. The zone displays on the keypads, reports to the event log, and transmits to the central station (if programmed) on Partition 1. The trouble is cleared from the display by entering the user code + OFF.

Wiring the Alarm Output

The wiring of the Notification Appliance Circuits depends upon whether you are going to supervise the circuit or not. Use the appropriate procedure below for your application.

UL Use only UL Listed sounding devices for UL installations.

Compatible Alarm Indicating Devices

Model	Device Type
ADEMCO AB12	Grade A Bell
System Sensor PA400B (beige/PA400R (red)	Indoor piezo sounder rated at 90dB @ 10 feet.
System Sensor MA-12/24	Horn
System Sensor SS1215 ADA	Strobe
System Sensor SS121575 ADA	Strobe
System Sensor MASS1215 ADA	Horn/Strobe
System Sensor MASS121575 ADA	Horn/Strobe
System Sensor MA/SS-12	Horn/Strobe
Wheelock LS1-12-VFR	Strobe
Wheelock MS1-12-VFR	Strobe
Wheelock MT-12-LS-VFR	Horn/Strobe
Wheelock MT4-12-LS-VFR	Horn/Strobe
Wheelock MT-12-MS-VFR	Horn/Strobe
WheelockMT4-12-MS-VFR	Horn/Strobe
Gentex GXS-2-15	Strobe
Gentex GXS-2-1575	Strobe
Gentex SHG-12-15	Horn/Strobe
Gentex SHG-12-1575	Horn/Strobe
Faraday 5336L-U-14-12-DC	Horn/Strobe
Faraday 5337-L-U-14-12-DC	Horn/Strobe

BELL 1 FACTORY DEFAULTS

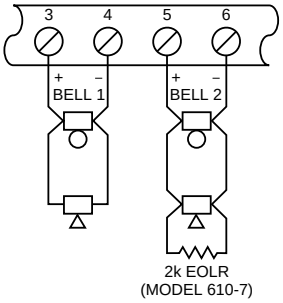
BELL 1 IS CONFIGURED AS A BURGLARY BELL CIRCUIT

- USE NONPOLARIZED GRADE A INDICATING DEVICES (e.g., ADEMCO NO AB12 - SEE WIRING NOTES BELOW)
- WIRING IS NOT SUPERVISED; CUT WHITE JUMPER, W1, ON MAIN PCB.
- ACTIVATES FOR ZONES 3-8 ALARMS (BY DEFAULT, ZONES 3-8 ARE ASSIGNED TO BURGLARY PARTITION 1)
- STEADY ALARM OUTPUT
- 16-MINUTE TIMEOUT.

BELL 2 FACTORY DEFAULTS

BELL 2 IS CONFIGURED AS A FIRE BELL CIRCUIT

- USE POLARIZED INDICATING DEVICES.
- CLASS B OPEN/SHORT SUPERVISION.
- 24-HR TROUBLE RESPONSE TO FAULTS.
- ACTIVATES FOR ZONE 1-2 ALARMS (BY DEFAULT, ZONES 1-2 ARE ASSIGNED TO FIRE PARTITION 1)
- PULSED ALARM OUTPUT.
- NO TIMEOUT



AB12 WIRING NOTES:

- DISCONNECT THE AB12'S FACTORY-WIRED CONNECTION FROM ITS TERMINAL #4 TO ITS OUTER BOX.
- SET FIELD 3* 17 TO "1" TO ENABLE ZONE 6 TAMPER FUNCTION.
- ASSIGN ZONE 6 TO A BURGLARY PARTITION. PROGRAM IT FOR DAY TROUBLE/NIGHT ALARM RESPONSE (TYPE 05) WHEN THIS BELL IS USED BY ONLY ONE BURGLARY PARTITION. PROGRAM IT FOR 24-HR. AUDIBLE ALARM RESPONSE (TYPE 07) WHEN THIS BELL IS USED BY MORE THAN ONE BURGLARY PARTITION.
- ALL WIRING FROM AB12 TO PANEL MUST BE RUN IN CONDUIT.

AB12 BELL/BOX WIRING

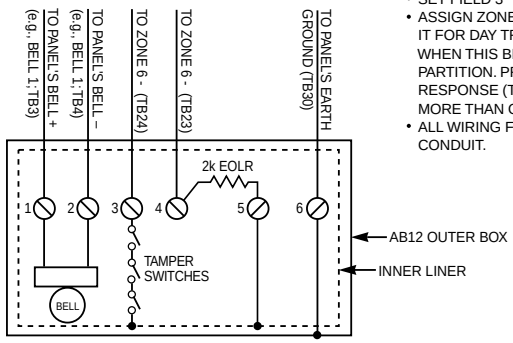


Figure 3-6: External Sounder Connections

Supervising the Notification Appliance Circuits

To wire the NAC using the supervision feature, perform the following steps:

Step	Action
1	Install a 2K EOL resistor (Model 610-7, supplied) across the last notification appliance on each Notification Appliance Circuit to be supervised.
2	Program Zone 970 (Bell 1) and zone 971 (Bell 2) with a response type of 19 (24-Hour Trouble).

Disabling the Supervision of the Notification Appliance Circuits

To install the NAC and disable the supervision feature, perform the following steps:

Step	Action
1	Cut the white jumpers W1 (for Bell 1) and W2 (for Bell 2) on the main PC board.
2	Program Zone 970 (Bell 1) and zone 971 (Bell 2) with a response type of 00.

The Notification Appliance Circuits will not respond unless the zones are assigned to them. For fire alarms, the system displays "FIRE ALARM SILENCED." This message also displays if the Notification Appliance Circuit is not supervised.

Auxiliary Relay Connections

The FA1700c provides a built-in Form C relay with contacts rated at 28VAC/VDC, 2.8A. The relay may be programmed (field 3✳61) for one of the following functions:

- Alarm Activation
- Trouble/Supervisory Activation
- 4-Wire Smoke Detector Reset
- Battery Saver

Alarm Activation

(3✳61 = 1 or 4) Steady activation in response to an alarm.

If field 3✳61 = 1, the auxiliary relay remains active until Aux. Relay Timeout expires or until **User Code + OFF** is entered. This option can be used to provide an unsupervised Notification Appliance Circuit for supplementary strobes, sounders, etc. when wired to the Aux Power 1 or a separate power supply, see *Figure 3-7*.

If field 3∗61 = 4, the auxiliary relay remains activated until **User Code + # + 67** is entered. This option can be used for elevator recall or ventilator shutdown on fire alarms. By default, the relay is set to activate on alarm zones 1-8 with no timeout (field 3∗61 = 1).

When field 3∗61 = 1, the auxiliary relay can be programmed to give a brief activation for confirmation of arming ding (field 3∗57) or Chime Mode (field 3∗59).

AUX RELAY FACTORY DEFAULTS
- ACTIVATES FOR ZONES 1-8 ALARMS (STEADY ALARM OUTPUT).
- NO TIMEOUT.

NOTES:
- USE NON-POLARIZED INDICATING DEVICES.
- WIRING IS NOT SUPERVISED.
- DO NOT EXCEED RATINGS OF THE SUPPLY USED. IF AUX. PWR. 1 OUTPUT IS USED, THE COMBINED ALARM CURRENT DRAIN FROM AUX. PWR. 2, BELL 1, AND BELL 2 CANNOT EXCEED 2.3A MAX.

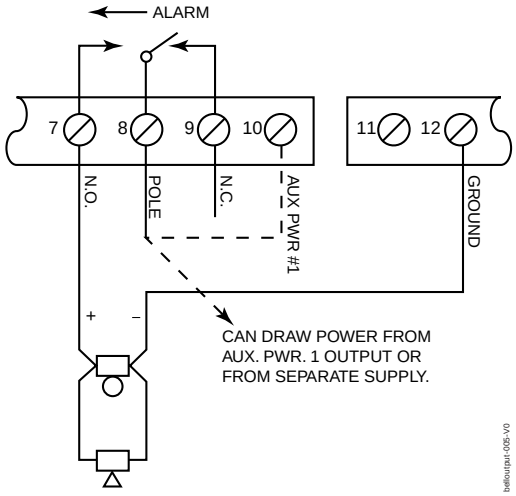


Figure 3-7: Wiring Auxiliary Relay for Alarm Activation

Trouble/Supervisory Activation

(3∗61 = 0) Steady activation in response to any zone or system related trouble condition or to any fire supervisory condition. The auxiliary relay remains activated until all fault conditions have been corrected and a **User Code + OFF** is entered.

4-Wire Smoke Detector Reset

(3∗61 = 2) Momentary (6-second) activation in response to a second entry of a **User Code + OFF** sequence following a fire alarm condition. This interrupts power to 4-wire smoke detectors connected to hardwired zones 1-8 and polling loop zones, allowing the detectors to be reset. Power to the detectors should be wired to the auxiliary relay and to Aux. Power 1 output, see *Figure 3-8*.

Battery Saver

(3∗61 = 3) When this option is selected, the auxiliary relay is normally activated (e.g., N.O. and pole contacts are connected) and de-activates 4 hours after the start of AC Loss. Using this feature, non-critical loads, such as supplementary keypads, can be disconnected from the auxiliary power outputs, allowing a smaller capacity battery to be used. The relay re-activates within a few seconds after the AC power restores.

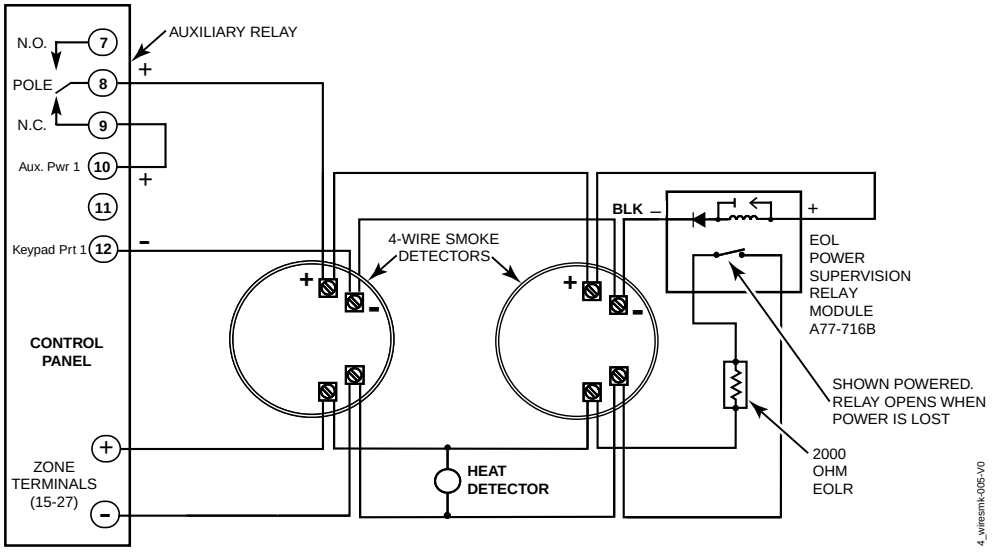


Figure 3-8: Wiring Auxiliary Relay for Smoke Detector Reset on FA1700c